

QVQLVQSGAEVKPGASVKVSCKASGYTFTGYWIEWVRQAPGQGLEWMGEI
LPGSGTTNYNEFKGRVTMTRDTSTVYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWQGQGTLTVSS

FIG. 1A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYSTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQHFYSYPLTFGGGTKVEIK

FIG. 1B

QVQLVQSGAEVKPGASVKVSCKASGYTFTGYWIEWVRQAPGQGLEWMGE
WLPGSGTTNYNEFKGRVTMTRDTSTVYMELSSLRSEDTAVYYCARADYY
GSDYVKFDYWQGQGTLTVSS

FIG. 2A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYSTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQHFYSYPLTFGGGTKVEIK

FIG. 2B

QVQLVQSGAEVKPGASVKVSCKASGYTFTYYWIEVRQAPGQGLEWMG
E
W
L
P
G
S
G
T
T
N
Y
N
E
K
F
K
G
R
V
T
M
T
R
D
T
S
T
V
Y
M
E
L
S
S
L
R
S
E
D
T
A
V
Y
Y
C
A
R
A
D
Y
Y
G
S
D
H
V
K
F
D
Y
W
G
Q
G
T
L
V
V
S

FIG. 3A

DIQMTQSPSSLSASVGDRVTITCLASQHVGTHVTWYQQKPGKAPKLLIYGTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQHFYDYP
PLTFGGGT
KVEIK

FIG. 3B

QVQLVQSGAEVKPGASVKVSCKASGYTFTGYWIEVRQAPGQGLEWMG
E
W
L
P
G
S
G
T
T
N
Y
N
E
K
F
K
G
R
V
T
M
T
R
D
T
S
T
V
Y
M
E
L
S
S
L
R
S
E
D
T
A
V
Y
Y
C
A
R
A
D
Y
Y
G
S
D
H
V
K
F
D
Y
W
G
Q
G
T
L
V
V
S

FIG. 4A

DIQMTQSPSSLSASVGDRVTITCKASQHVGTHVTWYQQKPGKAPKLLIYGTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQHFYEY
PLTFGGGT
KVEIK

FIG. 4B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSGYIEWVRQAPGQGLEWMGEI
LPGSGTTNYNEKFKGRTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWQGQTLTVSS

FIG. 5A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYSTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 5B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSGYIEWVRQAPGQGLEWMGEI
LPGSGTTNPNEKFKGRTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWQGQTLTVSS

FIG. 6A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYSTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 6B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSGYWIEWVRQAPGQGLEWMGEI
LPGSGTTNYNEKFKGRTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWGGQGTLTVSS

FIG. 7A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYGTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 7B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSYYWIEWVRQAPGQGLEWMGEI
LPGSGTTNPNEKFKGRTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWGGQGTLTVSS

FIG. 8A

DIQMTQSPSSLSASVGDRVITCKASQHVITHVTWYQQKPGKAPKLLIYGTS
YSYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 8B

7F3com-2H2 V_H

1 CAGGTGCAG CTGGTGCAG TCTGGGGCT GAGGTGAAG AAGCCTGGG
46 TCCTCAGTG AAGGTTCC TGCAAGGCA TCTGGAGGC ACCTTCAGC
91 TATTACTGG ATAGAGTGG GTGCGACAG GCCCCTGGA CAAGGGCTT
136 GAGTGGATG GGAGAGATT TTACCTGGA AGTGGTACT ACTAACCCG
181 AATGAGAAG TTCAAGGGC AGAGTCACC ATTACCGCG GACGAATCC
226 ACGAGCACA GCCTACATG GAGCTGAGC AGCCTGAGA TCTGAGGAC
271 ACGGCCGTG TATTACTGT GCGAGAGCG GATTACTAC GGTAGTGAT
316 TACGTCAAG TTTGACTAC TGGGGCCAA GGAACCCTG GTCACCGTC
361 TCCTCA

FIG. 9A7F3com-2H2 V_L

1 GACATCCAG ATGACCCAG TCTCCATCC TCCCTGTCT GCATCTGTA
46 GGAGACAGA GTCAACCATC ACTTGCAAG GCAAGTCAG CATGTGATT
91 ACTCATGTA ACCTGGTAT CAGCAGAAA CCAGGGAAA GCCCCTAAG
136 CTCCTGATC TATGGGACA TCCTACAGC TACAGTGGG GTCCCATCA
181 AGGTTCACT GGCAGTGGA TATGGGACA GATTTCACT CTCACCATC
226 AGCAGTCTG CAACCTGAA GATTTGCA ACTTATTAC TGTCAGCAA
271 TTTTACGAG TATCCTCTC ACGTTCGGC GGAGGGACC AAGGTGGAG
316 ATCAAA

FIG. 9B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSGYWIEWVRQAPGQGLEWMGEI
LPGSGTTNPNEKFGRVTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWGQGTLTVSS

FIG. 10A

DIQMTQSPSSLSASVGDRVITCKASQHVGTHVTWYQQKPGKAPKLLIYGTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 10B

QVQLVQSGAEVKPGSSVKVSCKASGGTFSYYWIEWVRQAPGQGLEWMGEI
LPGSGTTNPNEKFGRVTITADESTSTAYMELSSLRSEDTAVYYCARADYYGS
DYVKFDYWGQGTLTVSS

FIG. 11A

DIQMTQSPSSLSASVGDRVITCKASQHVITHVTWYQQKPGKAPKLLIYGTSY
RYSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQFYEYPLTFGGGTKEIK

FIG. 11B

Accession No. NM_000590

1 ccgctgtcaa gatgcttctg gccatggtcc ttacctctgc cctgctcctg tgctccgtgg
61 caggccaggg gtgtccaacc ttggggggga tcctggacat caacttcctc atcaacaaga
121 tgcaggaaga tccagcttcc aagtgccact gcagtgcata tgtgaccagt tgtctctgtt
181 tgggcattcc ctctgacaac tgcaccagac catgcttcag tgagagactg tctcagatga
241 ccaataccac catgcaaaca agataccac tgattttcag tcgggtgaaa aaatcagtt
301 aagtactaaa gaacaacaag tgtccatatt tttcctgtga acagecatgc aaccaaacca
361 cggcaggcaa cgcgctgaca tttctgaaga gtcttctgga aattttccag aaagaaaaga
421 tgagagggat gagaggcaag atatgaagat gaaatattat ttatcctatt tattaaattt
481 aaaaagctt ctcttaagt tgctacaatt taaaaatcaa gtaagctact ctaaatcagt
541 atcagttgtg attatttgtt taacattgtt tgtctttatt ttgaaataaaa t

FIG. 12

Accession No. A60480

1 mllamvltsa lllcsvaggg cptlagildi nflinkmqed paskchcsan vtsclclgip
61 sdnctrpcfs erlsqmtntt mqtryplifs rvkksvevlk nnkcpyscse qpcnqttagn
121 altfiksle ifqkekrmrgm rgki

Accession No. NP_000584

1 maellasags acswdfprap psfpppaasr gllggtrsfr phrgaesprp grdrdgvrvp
61 massrcpapr gcrclpas1 awlgtvlll1 adwv11rtal prifsl1vpt alpl1rvwaw
121 glsrwawl1 gacgv1ratv gksenagaq gwlaalkpla aalglalpgl alfreliswg
181 apgsadstrl lhwgshptaf vvsyaalpa aalwhklgsl wvgggggsg npvrrllgcl
241 gsetrrrls1f l1vvv1ss1g emaipfftgr ltdwilqdgs adtftrnl1 msiltiasav
301 lefvvgdgiyn ntmghvhsh1 qgevfgavlr qteffqqnq tgnimsrvte dtst1sd1s
361 en1slflwyl vrglc11gim lwgsvs1tmv t1it1pl1fl lpkkvgkwq llevqvresl
421 akssqvaiea lsamptvrsf aneegeaqkf rek1qeiktl nqkeavayav nswttsisgm
481 llkvigilyig gqlvtsgavs sgnlvtfvly qmqftqavev llsiyprvqk avgsskife
541 yldrtprccp sgl1tplhle glvfqfdvsf aypnrdpv1v lqglft1rp geftalvgpn
601 gsgkstvaal lqnlyqptgg q111dgkplp qyehrylhqr vaavgqepqv fgrslqenia
661 ygltqkptme eitaavksg ahsfisglpq gydtevdeag sq1sggqrqa valaralirk
721 pcvl1ddat saldansqlq veqllyespe rysrv1lit qhlsliveqad hilfleggai
781 reggthqqlm ekkgcywamv qapadape

Accession No. AAC17735

1 mv1tsall1c svaggcptrl agildinfli nkmqedpask chcsanvtsc lclgipsdnc
61 trpcfserls qmtntemqtr yplifsvkk svevlknkc pyfsceqpcn qttagnaltf
121 lksllefqk ekmrgrmgki

FIG. 13

Accession No. NM_002186

1 agcagctctg taatgcgtt gtggtttcag atgtggcgaa cctgtgtgaa cctgtcggtc
61 aaagctcacg tcaccaactg ctgcaggatct ctcctgaatc aggctgagggt tctttgtgt
121 gcacccagag atagttgggt gacaatcac ctccaggttg gggatgcctc agacttgta
181 tgggactggg cagatgcac tgggaaggct ggaccttggg gagtgaggcc ctgaggcgag
241 acatgggcac ctggctcctg gcctgcacatc gcacatgcac ctgtgtctgc ttgggagatct
301 ctgtcacagg ggaaggacaa gggccaaggt cttagaacctt cacctgcctc accaacaaca
361 ttctcaggat cgattgccac tggctctccc cagagctggg acagggtctcc agccccctggc
421 tcctcttcac cagcaaccag gtccttgcgc gcacacataa gtgcacatctt cggggcagtg
481 agtgcaccgt cgtgtgcac cctgaggcag tgctcgtgccc atctgacaat ttcaccatca
541 ctttccacca ctgcacatgtct gggaggaggc agtgcacccctt ggtggaccccg gagtacatgc
601 cccggagaca cgttaagctg gacccgcctt ctgacttgca gagcaacatc agttctgccc
661 actgcacatc gacctggagc atcagttcttgc cttggagcc aatgaccaca cttctcagct
721 atgagctggc cttaagaag caggaagagg cttggagggca gggccacac agggatcaca
781 ttgtcggtt gacctggctt atacttgaag cttttgagct ggaccctggc tttatccatg
841 aggccaggct gcggttccag atggccacac tggaggatga tgggttagag gaggagcggt
901 atacaggcca gtggagtgag tggagccacg ctgtgtgtt ccaggctccc cagagacaag
961 gcccctgtat cccacccctgg ggggtggccag gcaacacccct tggctgtgt tccatcttc
1021 tcctgtgtat tggcccgacc tacctctgt tcaagctgtc gcccagggtt aagagaatct
1081 tctaccagaa cgtgcctctt ccagcgtatgt tcttccagcc cctctacagt gtacacaatg
1141 ggaacttcca gacttggatg gggggccacg gggccgggtgt gctgttgagc caggactgtg
1201 ctggcaccaccc acaggggagcc ttggagccct gctgtccagga ggccactgca ctgctcactt
1261 gtggcccacg gctgtccctgg aaatctgtgg ccctggagga ggaacaggag gggccctggg
1321 ccagggctcc ggggaacctg agctcagagg atgtgtgttgc agcagggtgt acggagtgga
1381 gggtaacagac gcttgcetat ctgcccacagg agactgggc ccccaacgtcc ctgacttaggc
1441 cggctcccccc agactcagag ggcagcagga gcagcagcag cagcagcagc agcaacaaca
1501 acaactactg tgccttggc tgctatgggg gatggcactt ctcagccctc ccagggaaaca
1561 eacagagctc tggcccatc ccagccctgg cctgtggccct ttcttgtgac catcaggggcc
1621 tggagaccca gcaaggagtt gcctgggtgc tggctggtca ctgcccagg cctgggctgc
1681 atgaggacat ccagggcatg ttgctccctt ctgtccctcag caaggctcgg tcctggacat
1741 tcttaggtccc tgaetcgcac gatgcacatcat gtccattttggaaaatggaa ctgaagtttcc
1801 tggagccctt gtctgagact gaaacctctg agaaggggcc cctagcagcg gtcagaggt
1861 ctgtctggat ggaggctgg ggetcccccc tcaacccctc tgctcagtgc ctgtggggag
1921 cagccctctac cctcagcattt ctggccacaa gtcttccctt ccattgtccc ttttctttat
1981 ccctgacccctc tctgagaagt ggggtgtggt ctctcagctg ttctgcctc atacccttaa
2041 agggccagcc tggggcccaagt ggacacaggt aaggccacat gaccacctgg tggatggct gttaaaaaaaa
2101 ctgtgcctta ctgaggcacc tttcttagaga taaaaagggg cttgatggct gttaaaaaaaa
2161 aaaaaaaaaa a

FIG. 14A

Accession No. NM 176786

1 agcagctctg taatgcgtt gtggtttcag atgtggccgg cctgtgtgaa cctgtcgtr
61 aaagctcacg tcaccaactg ctgcagttat ctctctaacc aggctgaggg tctttgcgtt
121 gcacccagag atagttgggt gacaatcac ctccaggttg gggatgcctc agacttgtga
181 tgggactggg cagatgcatttggaaagtaa ctgctgcaag aacggacaga cactgctgca
241 gagaacttgc cacgtgttt catgctgtgg ctgggtt caggctgcac gctccattct
301 agggaaagggg ccctcagccc agtcccttgc aggtggacc ttggagatg aggccctgag
361 gcgagacatg ggcacctggc tcctggctg catctgcatttgcacatgtg tctgtttggg
421 agtctctgtc acaggggaag gacaaggccc aaggtaga accttcacat gcttcaccaa
481 caacatttctc aggatcgatt gccactggtc tgccccagag ctggacagg gctccagccc
541 ctggctccctc ttaccaggc tcctggccgc acacataagt gcatcttgcg gggcagttag
601 tgcaccgtcg tgctgccacc tgaggcagtg ctgcatttgcat gacaaattt caccatca
661 ttccaccact gcatgtctgg gagggagcag gtcaatggc tggacccggg gtacctggcc
721 cggagacacg agcaacatca gttctggcca ctgcatttgc acctggagca tcagtcctgc
781 cttggagcca atgaccacac ttctcagcta ttagctggcc ttcaagaagc aggaagaggg
841 ctgggagcag gcccagcaca gggatcacat tgcgggggtt acctggctt tacttgaagc
901 ctttgagctg gaccctggct ttagccatga gcccaggctg cgtgtccaga tggccacact
961 ggaggatgtat gttgttagagg aggagcgta tacaggccag tggagttagt ggagccagcc
1021 tgtgtcttc caggctcccc agagacaagg ccctctgate ccaccctggg ggtggccagg
1081 caacaccctt gttgtgtgt ccatcttct cctgctgact ggccgacact accttcgtt
1141 caagctgtcg cccagacttg gatggggcc cacggggccg gtgtgtctt gagccaggac
1201 tgtgtggca ccccacaggg agccttggag ccctgcgtcc aggaggccac tgcactgtc
1261 acttgtggcc cagcgcgtcc ttggaaatet ttggccctgg aggaggaaca ggagggccct
1321 gggaccagge tccccgggaa cctgagctca gaggatgtgc tgccagcagg gtgtacggag
1381 tggagggtac agacgttgc ctatctgc caaggaggact gggccccac gtccctgact
1441 aggccggetc ccccagactc agagggcagc aggaacgagca gcagcagcag cagcagcaac
1501 aacaacaact actgtgcctt gggctgtat gggggatggc accttcgtc cctccagga
1561 aacacacaga gtcgtggcc catcccgacc ctggctgttgc gccttcttgc tgaccatcag
1621 ggcctggaga cccagcaagg agttgcctgg gtgtggctt gtcactgc caaggccctgg
1681 ctgcattgtt accctccaggg catgttgc cttctgtcc tcageaaaggc tcggctctgg
1741 acattctagg tecctgactc gccagatgca tcatgtccat ttggaaaaa tggactgaag
1801 tttctggagc cttgtctga gactgaacctt cttgagaagg ggcctcttgc agcggcaga
1861 ggtcctgtctt ggtggaggc tggaggcttcc cccctcaacc cctctgtca gtgcctgtgg
1921 ggagcagctt ctaccctcag catcctggcc acaagttctt ctttcatttgc tccctttct
1981 ttatccctga cctctgtgg aagtgggggtt tggctctca gctgtctgc cctcataaccc
2041 ttaaaggccc agcctggcc cagttggacac aggttaaggca ccatgaccac ctgggtgtgac
2101 ctctctgtgc cttaactgagg caccttctca gagattaaaa ggggcttgat ggctgttaaaa
2161 aaaaaaaaaaaaaaa

FIG. 14B

Accession No. NM_000206

1 gaagagcaag cgccatgtt aagccatcat taccattcac atcccctta ttcctgcagc
61 tgcccctgct gggagtgggg ctgaacacga caattctgac gccaatggg aatgaagaca
121 ccacagctga ttcttcctg accactatgc ccactgactc cctcaagtgtt tccactctgc
181 ccctcccaaga ggttcagtgt tttgtttca atgtcgagta catgaattgc acttggaaaca
241 gcagctctga gccccagctt accaacctca ctctgcattt tgggtacaag aactcggata
301 atgataaaagt ccagaagtgc agccactatac tattcttga agaaaatcaact tctggctgtc
361 agttgcaaaa aaaggagatc cacccttacc aaacatttg ttttagctc caggaccac
421 gggAACCCAG gagacaggcc acacagatgc taaaactgca gaatctggg atcccctggg
481 ctccagagaa cctaacaactt cacaaactga gtgaatccc gctagaactg aactggaaaca
541 acagattctt gaaccactgt ttggagact tggtagcactt ccggactgac tgggaccaca
601 gctggactga acaatcgtg gattatagac ataagttctc cttgcctagt gtggatgggc
661 agaaaacgta cacgtttcggtt gttcggagcc gctttaaacc actctgtgga agtgcctc
721 attggagtgta atggagccac ccaatccact gggggagcaa tacttcaaaa gagaatcctt
781 tcctgtttgc attggaagcc gtggttatct ctgttggctc catgggattt attatcagcc
841 ttctctgtgt gtatttctgg ctggAACGGA cgatgccccg aattccccacc ctgaagaacc
901 tagaggatct tgtaactgaa taccacggga acttttcggc ctggagttgt gtgtctaagg
961 gaGTGGCTGA gaGTCTGCAG ccagactaca gtgaacgact ctgcctcgac agtgagattc
1021 ccccaaaagg agggggccctt ggggaggggc ctggggccctc cccatgcaac cagcatagcc
1081 cctactgggc ccccccattgt tacaccctaa agcctgaaac ctgaaccacc atccctctgac
1141 agaagaaccc cagggtcctg tageccctaa tgtaactaac ttcccttcat tcaaccacc
1201 tgcgtctcat actcacctca ccceactgtg gctgatttgg aattttgtgc ccccatgtaa
1261 gcaccccttc atttggcatt ccccaattga gaattaccct tttggggcga acatgtttt
1321 ttctccctc agtctggccc ttccctttcg caggattctt ctcctccccc tctttccctc
1381 cttccctt tccatctacc ctccgattgt tcctgaacccg atgagaaata aagtttctgt
1441 tgataatcat c

FIG. 14C

Accession No.: NP_002177

1 mglgrciweg wtlesalrr dmgtwllaci cictcvclgv svtgeggpr srtftcltnn
 61 ilridchwsa pelggsspw llftsnqapg gthkcilrgs ectvvlppea vlvpsdnfti
 121 tfhhcmssgre qvslvdpeyl prrhvklpp sdlqsnissp hciltwsisp alepmttl1s
 181 yelafkkgee aweqaqhrdh ivgvtwile afeldpgfih earlrvqmat leddvveeer
 241 ytggwsewsq pvcfqapqrq gplippwgwp gntlvavsif llltgptyll fklsprvkri
 301 fyqnvpspam ffqplsvhn gnfqtwmgah gagvllsqdc agtpqgalep cvqeatallt
 361 cgparpwksv aleeeqegpg trlpgnisse dvlpagctew rvqtlaylpq edwaptstr
 421 pappdsegssr sssssssnn nnycalgcyg gwhlsalpgn tqssgpipal acglscdhqg
 481 letqqgvaww laghcqrpgl hedlqgmlp svlskarswt f

Accession No.: NP_789743

1 mhlgncckn gqtllqrtch gvscggwwfq aarsilgkpp saqlagwtl esealrrdmg
 61 twllacicic tcvcvgsvt gegggprsrt ftcltnnilr idchwsapel gqgsspw1lf
 121 trllaahisa scgavsapsc chlrqcschl tispslstta clggsrsaww trstcpgdts
 181 nissghcilt wsispalepm ttllsyelaf kkgeeaweqa qhrdhivgvt wileafeld
 241 pgfihearlr vqmatleddv veeerytggw sewsqpycfq apqrqgplip pwgwpngtlv
 301 avsifilltg ptyllfksp rlgwgptgpv cc

Accession No.: NP_000197

1 mlkpslpfts. llflqlpllg vglnttilp ngnedttadp flttmptds1 svstlplpev
 61 qcfcvfnveym nctwnsssep qptnltlhyw yknnsdndkvq kcshylfsee itsgeqlqkk
 121 eihlyqtfvv qlqdprerr qatqmlklqn lvipwapenl tlhklsesql elnwnnrfln
 181 helehlvgyr tdwdhswteq svdyrhkfsl psvdgqkryt frvrsrfnp1 cgsaqhwsew
 241 shpihwgsnt skepflfal eavvisvgsm gliisllcvy fwlertmpri ptlnkledlv
 301 teyhgnfsaw sgvskglaes lqpdyserlc lvseippkgg algeggasp cnqhsipywap
 361 pcytlkpet

FIG. 15